

KIRKOS SUB-CITY EDUCATION OFFICE

2012/2020 GRADE 8 BIOLOGY MODEL EXAMINATIONS

TIME ALLOWED: 1: 00 HOUR

GENERAL DIRECTIONS:

THIS BOOKLET CONTAINS **BIOLOGY** EXAMINATION.THE EXAMINATION CONTAINS **60** ITEMS. ATTEMTE ALL THE ITEMS. FOLLOW THE INSTRUCTIONS ON THE ANSWER SHEET AND THE EXAMINATION PAPER EXACTLY. USE ONLY PENCIL TO MARK YOUR ANSWERS.

THERE IS ONLY ONE BEST ANSWER FOR EACH ITEM. CHOOSE THE BEST ANSWER FROM THE SUGGESTED OPTIONS AND BLACKEN THE LETTER OF YOUR CHOICE ON THE ANSWE SHEET. YOUR ANSWER SHOULD BE DARK, COVERING THE ANSWER SPACE COMPLETELY.

YOU WILL BE ALLOWED TO WORK FOR 1:00 HOUR. IF YOU FINISH BEFORE TIME IS CALLED, YOU MUST IMMEDIATELY STOP WORKING, LAY YOUR PENCIL DOWN AND WAIT FOR FURTHER INSTRUCTIONS.

ANY FORM OF CHEATING OR AN ATTEMPT TO CHEAT IN THE EXAMINATION HALL WILL RESULT IN AN AUTOMATIC DISMISSAL FROM THE EXAMINATION HALL AND CANCELLATION OF YOUR SCORES (S).

1. Which one of the following is not the main branch of biology?
 - A. Botany
 - B. Taxonomy
 - C. Microbiology
 - D. Zoology
2. The role of crop rotation on agricultural farmlands include all of the following, except:
 - A. reducing the effect of crop pests
 - B. keeping the soil fertile
 - C. preventing soil erosion
 - D. increasing crop yield
3. Which of the following antimicrobial chemical substances are used to fight bacterial infectious diseases such as syphilis and gonorrhea?
 - A. Antiseptic
 - B. Antibiotic
 - C. Disinfectant
 - D. None of the above
4. Which of the following local herbal medicines is not used to kill parasitic worms?
 - A. Dingetegna
 - B. Enkoko
 - C. Meterae
 - D. Kosso
5. Which of the following is the role of biology in food production?
 - A. Examining the nutritional contents of each foodstuffs
 - B. Dealing with the health benefits of each nutrients contained in food
 - C. Preserving food quality during processing, transporting and consuming
 - D. All of the above
6. A pair of identical telescope mounted side by side and aligned to focus and view distant objects refers to be:
 - A. microscope
 - B. stethoscope
 - C. binocular
 - D. centrifuge
7. An example of compound microscope from the following instruments is:
 - A. monocular microscope
 - B. magnifying glass
 - C. hand lens
 - D. reading glass
8. If you magnify an object 1000x, while using a compound light microscope, probably you used an ocular lens (10x)and:
 - A. high power objective lens
 - B. low power objective lens
 - C. oil immersion objective lens
 - D. middle power objective lens
9. An animal cell is different from plant cell in that: it
 - A. has a rectangular shape

- B. has a cellulose made cell wall covering its cell membrane
- C. is larger in size, compared to a plant cell
- D. has small vacuoles

10. In which part of the cell do sub cellular structures are contained? In the:

- A. vacuole
- B. plasma membrane
- C. cytoplasm
- D. nucleus

11. The types of animal cells and their shapes are wrongly paired in:

- A. Muscle cells – elongated and pointed at both ends
- B. Nerve cells – long and branched
- C. Red blood cells – rectangular
- D. Skin cells – thin and flat

12. The locomotory structures of euglena are:

- A. cilia
- B. pseudopodia
- C. pellicle
- D. flagella

13. Which of the following unicellular organisms can reproduce both sexually and asexually?

- A. Paramecium
- B. Bacterium
- C. Euglena
- D. Amoeba

14. During the process of fermentation, yeast cells convert sugar in fruits and grains into:

- A. alcohol and oxygen
- B. water and carbondioxide
- C. lactic acid and oxygen
- D. alcohol and carbondioxide

15. Which of the following cell types belongs to animals?

- A. Epidermal cells
- B. Epithelial cells
- C. Palisade cells
- D. Guard cells

16. Which of the following statements is correct about tissue?

- A. A group of similar cells are organized to build tissue
- B. Various types of cells are organized to form tissue
- C. Different tissues are combined to build organ-system
- D. All of the above

17. Which of the following plant organs (parts) do not belong to the root system?

- A. Branches
- B. Seeds
- C. Stem
- D. All of the above

18. One of the following animal organs is different from the others:

- A. skin
- B. lung
- C. tongue
- D. ear

19. Which of the following human skeletal parts belongs to the axial Skelton?

- A. Pelvic bone
- C. Clavicle

B. Sternum

D. Scapula

20. Which of the following is not the function of bones in the human skeleton?

A. Enabling body movement

B. Protection of vital organs

C. Regulating body temperature

D. Giving support and maintaining body shape

21. An example of movable joint that allow one directional movement only is:

A. vertebrae

C. hip

B. shoulder

D. knee

22. Muscle tissues are the most abundant tissue types in most mammals. Their types are correctly shown by:

A. Skeletal muscles- involuntary muscles

B. Smooth muscles – voluntary muscles

C. Cardiac muscles – involuntary muscles

D. None of the above

23. In the given dental formula of lion, which is $\frac{3131}{3121}$, the total number of premolars on the upper jaw is:

A. 10

B. 6

C. 30

D. 4

24. The most notable tooth type in carnivores used for piercing and tearing off flesh from their prey's body is:

A. premolar

C. canine

B. molar

D. incisor

25. Primary sexual characteristics are acquired during:

A. birth

B. adolescence and puberty

C. adulthood

D. childhood

26. Which of the following male reproductive glands and their secretions are mismatched?

A. Cowper's gland – lubricant fluid

B. Seminal vesicle – nutritious fluid

C. Prostate gland – alkaline fluid

D. Testicles – seminal fluid

27. The correct order in the female reproductive system from the inside to the outside part is:

A. Vagina → cervix → uterus → oviduct → ovary

B. Ovary → oviduct → uterus → cervix → vagina

C. Uterus → cervix → oviduct → ovary → vagina

D. Oviduct → uterus → cervix → ovary → vagina

28. **Sperm cell + Egg cell** → **Zygote**. This process occurs inside _____ of the female reproductive part.

- A. ovary
- B. oviduct
- C. cervix
- D. uterus

29. Which of the following birth control methods can prevent both pregnancy and STIs?

- A. Contraceptive pill
- B. IUD
- C. Condom
- D. Vasectomy

30. Syphilis is a sexually transmitted disease caused by *Treponema pallidum*. The symptoms seen on the patient during the advanced stage of the disease commonly is:

- A. damage to internal organs such as heart and brain
- B. appearance of rash all over the body
- C. appearance of chancrae
- D. inflammation of reproductive organs

31. A sexually transmitted disease in which body's immune system loses its ability to fight off pathogens and to defend the body from diseases best describes:

- A. Gonorrhea
- B. HIV
- C. Syphilis
- D. Chancroid

32. An incorrect statement about plant groups from the following is:

- A. ferns are non-vascular seed plants
- B. gymnosperms are cone bearing seed plants
- C. angiosperms are flowering seed plants
- D. mosses are seedless non-vascular plants

33. The most advanced and economically important plant groups are:

- A. seedless non vascular plants (Simple plants)
- B. flowering seed plants (Angiosperms)
- C. seedless vascular plants (Ferns)
- D. non flowering seed plants (Gymnosperms)

34. Which of the following characteristics shows the difference between monocots and dicots?

- A. Monocots have net venation but dicots have parallel venation
- B. Monocots have vascular bundles distributed through out the cross section of the stem but dicots have vascular bundles arranged circularly
- C. Monocots have floral parts in four or five but dicots have floral parts in three
- D. Monocots have two cotyledons but dicots have one cotyledon in their seeds

35. Self pollination is the transfer of pollen grains from anther to stigma:

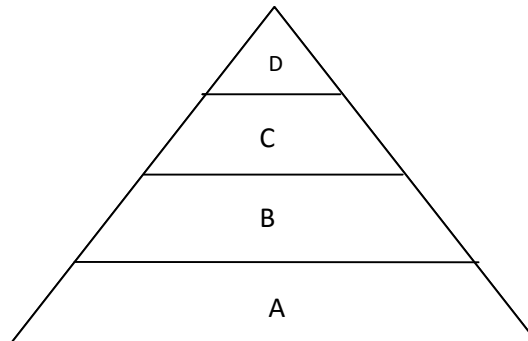
- A. between two flowers of the same plant

- B. between two plants of the same species
- C. within a flower
- D. A and C

36. All of the following shows characteristics of wind pollinated flowers, except the presence of:
- A. small and dusty pollen grains
 - B. long filaments, seen above the petals
 - C. large amount of pollen grains
 - D. bright and colorful petals
37. After fertilization is completed in flowers which of the following processes do not takes place?
- A. The fertilized polar nuclei form endosperm
 - B. The fertilized egg develops into embryo
 - C. Ovule develops into fruits
 - D. Ovary develops into fruit that covers the seed
38. The storage form of the food which is produced by the process of photosynthesis in leaf mesophyll cells is:
- A. starch
 - B. glycogen
 - C. sucrose
 - D. glucose
39. Which of the following chemical equations correctly summarizes the process of food making in plants?
- A. $6H_2O + 6CO_2 \longrightarrow C_6H_{12}O_6 + 6O_2$
 - B. $C_6H_{12}O_6 + 6O_2 \longrightarrow 6H_2O + 6CO_2$
 - C. $6H_2O + O_2 \longrightarrow C_6H_{12}O_6 + 6CO_2$
 - D. $C_6H_{12}O_6 + 6CO_2 \longrightarrow 6H_2O + 6O_2$
40. The oxygen released during photosynthesis process comes from:
- A. CO_2
 - B. H_2O
 - C. $C_6H_{12}O_6$
 - D. NO_2
41. Which of the following plant species do not belong to indigenous trees?
- A. Juniperus
 - B. Acaccia
 - C. Eucalyptus
 - D. Podocarpus
42. The worker bee is a:
- A. sterile male bee
 - B. fertile female bee
 - C. fertile male bee
 - D. sterile female bee
43. The correct order in the life cycle of complete metamorphosis is:
- A. Egg $\longrightarrow$ Nymph $\longrightarrow$ Adult
 - B. Egg $\longrightarrow$ Pupa $\longrightarrow$ Larva $\longrightarrow$ Adult
 - C. Egg $\longrightarrow$ Larva $\longrightarrow$ Pupa $\longrightarrow$ Adult
 - D. Adult $\longrightarrow$ Pupa $\longrightarrow$ Larva $\longrightarrow$ Egg
44. The locomotory structures of insects such as legs are attached to:
- A. thorax
 - C. abdomen

- B. head
D. A and C
45. The larva of honey bee that is expected to be a queen is fed with a special nutritive substance called:
A. phermone
B. honey
C. royal jelly
D. wax
46. Which of the following insects live a solitary life and not considered as a social insets?
A. Honeybee
B. Ant
C. Termite
D. Housefly
47. Which of the following shows the correct path, the ingested food follows in the ruminant's gut?
A. Mouth → Rumen → Reticulum → Mouth → Omasum → Abomasum
B. Mouth → Reticulum → Rumen → Mouth → Omasum → Abomasum
C. Mouth → Abomasum → Omasum → Mouth → Rumen → Reticulum
D. None of the above.
48. Which of the following farm animals has the longest gestation period?
A. Camel
B. Horse
C. Cow
D. Goat
49. The vector insect for the disease Trypanosomiasis is:
A. mosquito
B. tick
C. tsetse fly
D. mite

Question number 50-53 are based on the given pyramid



50. In the above diagram, primary consumers are labeled by the letter:
A. C
B. A
C. B
D. D
51. In the above diagram, the food producers are shown by the letter:
A. B
B. D
C. C
D. A
52. In the above diagram, the tertiary consumers are shown by the letter:
A. C
B. B
C. A
D. D

53. Which of the levels in the above pyramid show the least energy level and the highest biomass level, respectively?
- A. B and C
 - B. D and A
 - C. A and D
 - D. C and D
54. Biotic factors which involves in soil formation process are:
- A. temperature
 - B. mosses
 - C. moisture (humidity)
 - D. wind
55. Which type of soil is difficult to plough during wet (rainy) season?
- A. Clay soil
 - B. Loam soil
 - C. Sandy soil
 - D. Silt Soil
56. Which of the following is not a natural factors for soil erosion?
- A. Wind
 - B. Heavy rain
 - C. Deforestation
 - D. Land slide due to gravity
57. Commensalism is one of the symbiotic relationship between two organisms. Which of the following shows their correct association?
- A. Organism A (+) and Organism B (O)
 - B. Organism A (+) and Organism B (+)
 - C. Organism A (+) and Organism B (-)
 - D. Organism A (O) and organism B(O)
58. The breakdown of organic matters such as plant and animal remains in to simpler forms is said to be:
- A. weathering
 - B. soil degradation
 - C. humification
 - D. decomposition
59. During water cycle, cloud formation high up in the sky is caused by;
- A. evaporation
 - B. condensation
 - C. precipitation
 - D. transpiration
60. Which of the following methods can not be used to prevent soil erosion?
- A. Mining
 - B. Contour ploughing
 - C. Afforestation
 - D. Terracing